Cardiovascular disease

OP42 POTENTIAL IMPACTS OF BREXIT ON CARDIOVASCULAR DISEASE VIA CHANGES TO THE PRICE OF FRUITS AND VEGETABLES: A MODELLING ANALYSIS

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Background The UK’s decision to exit the European Union will likely affect its current trade regimes. Trade policy can alter food commodity availability and price; it is thus a potentially powerful determinant of food environments and subsequently health. The UK is highly dependent on its fruit and vegetable (F&V) imports. Brexit could therefore affect F&V price and consumption in the UK. Given the strong association between F&V intake and cardiovascular disease (CVD), our analysis aimed to quantify the potential effects of F&V price changes due to Brexit on CVD in English adults between 2020–2030.

Methods We used the previously validated IMPACT Food Policy Model. The model combined publicly available data on F&V trade, published estimates of UK-specific price elasticities, F&V intake data from the National Diet and Nutrition Survey, and coronary heart disease (CHD) mortality projections for 2020–2030. We estimated the number of CHD deaths and life-years lost between 2020–2030 among English adults aged 25 years and above as a consequence of five Brexit scenarios: (1) Transitional Brexit; (2) post-Brexit Free Trading Agreement with the EU and maintaining half of the non-EU free trade partners; (3) post-Brexit Free Trading Agreement with the EU but no trade deal with any non-EU countries; (4) post-Brexit liberalised trade regime; (5) no deal Brexit. We then performed Monte-Carlo simulations to better estimate uncertainty of inputs.

Results Under all Brexit scenarios, prices of F&V are likely to increase on average between 1.8% and 7.8%. The banana, citrus fruit, and tomato markets are likely to be the most disrupted, with price increases up to approximately 16.7%, 14.3%, and 13.4% respectively. A transitional Brexit is likely to result in approximately 670 (95% Uncertainty Interval: 430–980) extra CHD deaths and 6370 (4360–8990) life-years lost. A liberalised regime which eliminates all import tariffs is likely to contribute approximately 940 (600–1370) additional CHD deaths and 8870 (6060–12540) life-years lost, due to non-tariff trade barriers between the UK and the EU. A no-deal Brexit scenario might be the most harmful, generating approximately 2900 (1820–4310) extra CHD deaths and 27 440 (18,200–39,630) life-years lost between 2020–2030.

Conclusion This analysis suggested that under all modelled scenarios Brexit is likely to increase the price of F&V and thus have a detrimental effect on the future diet and health of English adults. The UK government should therefore aim to secure a post-Brexit food system that incentivises the UK population to purchase and consume healthy foods.